DOCUMENT RESUME

ED 277 769 TM 870 048

TITLE	Mathematics Objectives and Measurement Specifications, 1986-1990. Grade 1. Texas Educational Assessment of Minimum Skills (TEAMS).
INSTITUTION	Texas Education Agency, Austin. Div. of Educational Assessment.
PUB DATE	Mar 86
NOTE	23p.; For related documents, see TM 870 046-047.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Basic Skills; *Behavioral Objectives; Educational Assessment; Elementary School Mathematics; *Grade 1; Mathematics Achievement; *Mathematics Skills; *Minimum Competency Testing; Primary Education; State Programs; *State Standards; Test Format; Testing Programs; Test Items
IDENTIFIERS	Test Specifications; *Texas Educational Assessment of Minimum Skills

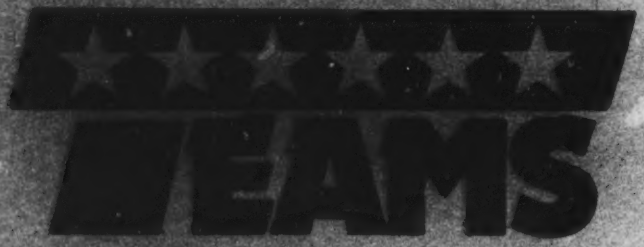
ABSTRACT

The learning objectives and the measurement specifications cited in this document are congruent with the Texas State Board of Education Rules for Curriculum. The objectives are provided for teachers and for test developers involved with the preparation of the Texas Educational Assessment of Mimimum Skills (TEAMS) tests. As of 1985-86 academic year, the TEAMS mathematics tests for grade 1 are based on the following objectives: (1) identify the correct solution to a problem involving number sequence; (2) identify the place value for a given problem; (3) identify the correct solution to a problem involving number comparison; (4) add two whole numbers whose sum is less than 20; (5) subtract a one-digit whole number from a whole number less than 20; (6) solve a one-step word problem involving addition/subtraction of whole numbers; (7) identify the correct time to the hour or half-hour; and (8) identify a named geometric shape. For each objective, this document provides a description of the test questions, a description of the answer choices and an example test question. (JAZ)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED277769

Texas Educational Assessment of Minimum Skills



Mathematics Objectives and Measurement Specifications 1986-1990 Grade 1

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L. Kemp

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Texas Education Agency
Division of Student Assessment
March 1986

BEST COPY AVAILABLE

TM 870 048

FOREWORD

The learning objectives contained in this volume are congruent with the State Board of Education Rules for Curriculum which outlines the rules and procedures for implementation of Section 21.101 of the Texas Education Code. These objectives and the measurement specifications are provided for use by teachers and other educators responsible for pupil instruction and for test development specialists involved with with the preparation of the Texas Educational Assessment of Minimum Skills (TEAMS) tests. Beginning with the 1985-86 school year, the TEAMS tests were based upon the objectives in this publication.

W. N. Kirby
Commissioner of Education

STATE BOARD OF EDUCATION

(State Board for Vocational Education)

JON BRUMLEY, Fort Worth
Chairman of the State Board of Education
District 11

REBECCA CANNING, Waco
Vice Chairman of the State Board of Education
District 9

EMMETT J. CONRAD, Dallas
Secretary of the State Board of Education
District 13

Board Members

VOLLY C BASTINE, JR., Houston
District 4

MARY HELEN BERLANGA, Corpus Christi
District 2

CAROLYN HONEA CRAWFORD, Beaumont
District 7

CHARLES W. DUNCAN, JR., Houston
District 6

PAUL C. DUNN, Levelland
District 15

MARIA ELENA A. FLOOD, El Paso
District 1

WILLIAM V. McBRIDE, San Antonio
District 5

GERALDINE MILLER, Dallas
District 12

PETE MORALES, JR., Devine
District 3

JOHN MACK PRESCOTT, College Station
District 10

KATHERINE PEARCY RAINES, Cleburne
District 14

JACK STRONG, Longview
District 8

W. N. KIRBY, Commissioner of Education
(Executive Officer of the State Board of Education)

Committees
of the
State Board of Education

Personnel
JOHN MACK PRESCOTT, Chairman
REBECCA CANNING
EMMETT J. CONRAD
CAROLYN HONEA CRAWFORD
PAUL C. DUNN

Finance & Programs
MARIA ELENA A. FLOOD, Chairman
JON BRUMLEY
WILLIAM V. McBRIDE
GERALDINE MILLER
PETE MORALES, JR.

Long-Range Planning
REBECCA CANNING, Chairman
MARY HELEN BERLANGA
EMMETT J. CONRAD
CAROLYN HONEA CRAWFORD
CHARLES W. DUNCAN, JR.
WILLIAM V. McBRIDE

Students
JACK STRONG, Chairman
VOLLY C. BASTINE, JR.
MARY HELEN BERLANGA
CHARLES W. DUNCAN, JR.
KATHERINE PEARCY RAINES

CONTENTS

List of Objectives 1

General Specifications 2

Objectives and Measurement Specifications 3

Objective 1. Identify the correct solution to a problem involving number sequence 3

Objective 2. Identify the place value for a given problem 4

Objective 3. Identify the correct solution to a problem involving number comparison 5

Objective 4. Add two whole numbers whose sum is less than 20 7

Objective 5. Subtract a one-digit whole number from a whole number less than 20 9

Objective 6. Solve a one-step word problem involving addition/subtraction of whole numbers 11

Objective 7. Identify the correct time to the hour or half-hour 13

Objective 8. Identify a named geometric shape 15

TEXAS EDUCATIONAL ASSESSMENT OF MINIMUM SKILLS

GRADE 1 MATHEMATICS

List of Objectives

Skill Area: Number Concepts

Objective 1. Identify the correct solution to a problem involving number sequence. *

Objective 2. Identify the place value for a given problem. *

Objective 3. Identify the correct solution to a problem involving number comparison.

Skill Area: Computation

Objective 4. Add two whole numbers whose sum is less than 20.

Objective 5. Subtract a one-digit whole number from a whole number less than 20.

Skill Area: Problem Solving

Objective 6. Solve a one-step word problem involving addition/subtraction of whole numbers.

Skill Area: Measurement

Objective 7. Identify the correct time to the hour or half-hour.

Skill Area: Geometry

Objective 8. Identify a named geometric shape.

* Items for these objectives will be open-ended.

GRADE 1 MATHEMATICS

General Specifications

I. Test Items

A. All test item questions will be read orally to the student at least twice. Students will write their answers in their test booklet.

B. All test items, except open-ended items for Objective 1 and Objective 2, will be followed by a set of three answer choices. One answer choice will be the correct response, and two answer choices will be incorrect responses.

C. Test items will contain only words in the Texas Education Agency (TEA) cumulative vocabulary list for Grade 1, except for proper nouns.

D. Word problems will contain a maximum of three sentences.

E. Word problems will not contain sentences longer than eight words. Each sentence will not contain more than one number.

F. Word problems shall represent various ethnic groups of populations in Texas. The three main groups are black, Hispanic, and white.

G. Word problems shall be free of stereotyping by age, sex, ethnicity, and geographical location.

H. Problem situations shall be appropriate for first grade students.

I. Neither "none of the above" nor "all of the above" shall be used as an answer choice in multiple-choice items.

II. Test Package Format

A. The test shall be printed on white paper.

B. Graphic displays, their corresponding items, and response choices shall appear on the same or facing pages.

C. Type size shall be appropriate for first grade students.

OBJECTIVES AND MEASUREMENT SPECIFICATIONS

SKILL AREA: NUMBER CONCEPTS

Objective 1

Identify the correct solution to a problem involving number sequence.

Description of Test Questions

1. Students will be presented with a verbal request to write the missing number in the box.

2. A number line will be presented with three whole numbers and one missing number. The missing number will fall between, immediately before, or immediately following numbers on a number line.

3. Eligible numbers will be whole numbers from 1 through 99.

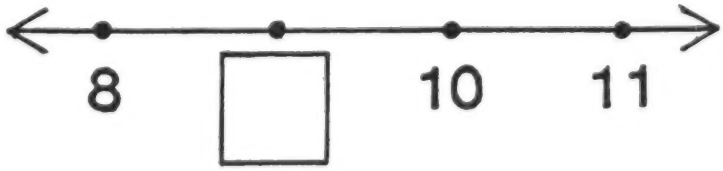
Description of Answers

1. The correct answer will be the number that falls between, immediately before, or immediately following numbers on a number line.

2. Incorrect answers will be any number other than the correct missing number.

Example of Test Questions

Teacher says: "Look at the number line. A number is missing. Write the missing number in the box."



SKILL AREA: NUMBER CONCEPTS

Objective 2

Identify the place value for a given problem.

Description of Test Questions

1. Students will be presented with a verbal request to write the number of tens and ones shown in the display.

2. Numbers will not exceed 99.

3. Pictures of ones and tens blocks will be used for the displays.

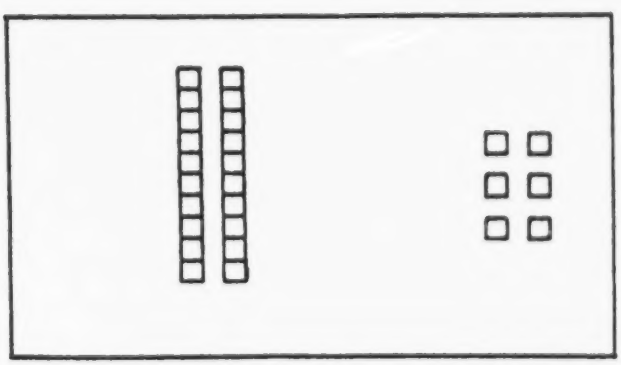
Description of Answers

1. The correct answer will be the number of tens and ones shown in the display.

2. Incorrect answers will be an incorrect number of tens or an incorrect number of ones.

Example of Test Questions

Teacher says: "Look at the picture. How many tens and ones are there? Write the number of tens and ones on the lines."



____tens ____ones

SKILL AREA: NUMBER CONCEPTS

Objective 3

Identify the correct solution to a problem involving number comparison.

Description of Test Questions

1. Given three numbers, students will be presented with a verbal request to find the smallest or largest number.

2. Eligible numbers will be whole numbers from 0 through 99 with intervals of at least 10 between any two numbers.

3. No two numbers in an item will have the same ten's digit.

4. No two numbers in an item will have reversed digits.

Description of Answer Choices

1. The correct answer choice will be the smallest or largest number.

2. The incorrect answer choices will be smaller numbers when asked for the largest or larger numbers when asked for the smallest.

Examples of Test Questions

Item 1

Teacher says: "Look at the numbers. Find the smallest number. Fill in the space under the smallest number."

19	34	56
⬭	⬭	⬭
(correct)	(incorrect:larger)	(incorrect:larger)

Item 2

Teacher says: "Look at the numbers. Find the largest number. Fill in the space under the largest number."

82	61	59
⬭	⬭	⬭
(correct)	(incorrect:smaller)	(incorrect:smaller)

SKILL AREA: COMPUTATION

Objective 4

Add two whole numbers whose sum is less than 20.

Description of Test Questions

1. A test item will require the addition of two whole numbers whose sum is less than 20.

2. Test items will be presented in vertical format with the symbol "+."

Description of Answer Choices

1. The correct answer choice will be the correct solution to the computation problem presented.

2. Incorrect answer choices will be drawn from the following types of errors:

   a. a basic operation error, that is, an error in addition; or

   b. an incorrect operation, that is, subtracting in an addition problem.

Example of Test Questions

Teacher says: "Look at the addition problem. Add 15 and 3. Fill in the space under the right answer."

```
  15
+  3
----
```

18	17	12
⬭	⬭	⬭
(correct)	(basic operation error)	(basic operation error)

SKILL AREA: COMPUTATION

Objective 5

Subtract a one-digit whole number from a whole number less than 20.

Description of Test Questions

1. A test item will require the subtraction of a one-digit whole number from a whole number less than 20.

2. The value of the number being subtracted will be less than the value of the number from which it is subtracted.

3. Test items will be presented in vertical format with the symbol "-."

Description of Answer Choices

1. The correct answer choice will be the correct solution to the computation problem presented.

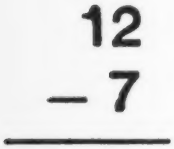
2. Incorrect answer choices will be drawn from the following types of errors:

   a. a basic operation error, that is, an error in subtraction; or

   b. an incorrect operation, that is, adding in a subtraction problem.

Example of Test Questions

Teacher says: "Look at the subtraction problem. Subtract 7 from 12. Fill in the space under the right answer."



5	19	8
○	○	○
(correct)	(basic operation error)	(incorrect operation error)

SKILL AREA: PROBLEM SOLVING

Objective 6

Solve a one-step problem involving addition/subtraction of whole numbers.

Description of Test Questions

1. A test item will require students to identify the correct solution to a word problem requiring addition or subtraction.

2. For word problems requiring the student to add:

   a. A test item will require the addition of two whole numbers.

   b. Eligible numbers will be one-digit whole numbers that sum to 18 or less.

3. For word problems requiring the student to subtract:

   a. A test item will require the subtraction of one whole number from another whole number.

   b. The value of the number being subtracted will always be less than the value of the number from which it is subtracted.

   c. The number being subtracted will be a one-digit whole number including 0, the maximum value of the number being subtracted from will be 18.

4. Extraneous numerical data will not be presented in any problem.

Description of Answer Choices

1. The correct answer choice will be the correct solution to the word problem presented.

2. Incorrect answer choices will be drawn from the following types of errors:

   a. a basic operation error, that is, an error in the addition or subtraction of the two numbers presented in the problem; or

   b. an incorrect operation, that is, adding in a subtraction problem or subtracting in an addition problem.

Examples of Test Questions

Addition

Teacher says: "Kim's yard has 2 trees. She plants 3 more trees. How many trees are in Kim's yard now.?"

(correct) (basic operation error) (basic operation error)

Subtraction

Teacher says: "Jane has 13 flowers. She gives 7 flowers away. How many flowers does Jane have now?"

(correct) (basic operation error) (basic operation error)

SKILL AREA: MEASUREMENT

Objective 7

Identify the correct time to the hour or half-hour.

Description of Test Questions

1. Students will be presented with a verbal request to find the time shown on the clock.

2. The clock will show the time to an exact hour or half-hour.

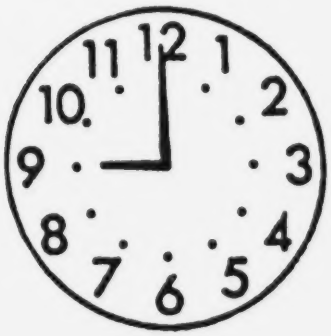
Description of Answer Choices

1. The correct answer will be the time shown on the clock.

2. The incorrect answers will be times, other than that shown on the clock, to exact hours or half-hours.

Example of Test Questions

Teacher says: "Look at the picture of the clock. What time does the clock show? Fill in the space which shows what time the clock shows."



9:00	12:00	10:00
⬭	⬭	⬭
(correct)	(incorrect)	(incorrect)

SKILL AREA: GEOMETRY

Objective 8

Identify a named geometric shape.

Description of Test Questions

1. Students will be presented with a verbal request to find a particular named geometric shape.

2. Eligible geometric shapes will be circles, rectangles, squares, and triangles. Shapes may vary in dimension and orientation.

Description of Answer Choices

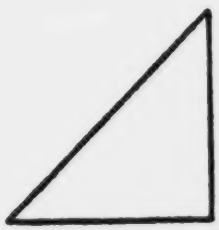
1. The correct answer choice will be a pictured display of the specified geometric figure.

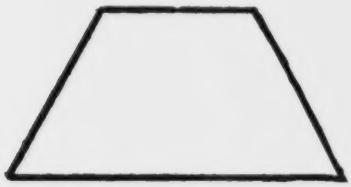
2. Incorrect answer choices will be pictured displays of geometric figures not specified. Eligible geometric figures are circles, rectangles, squares, triangles, ovals, quadrilaterals, and pentagons.

3. Incorrect answer choices for a square will not include a rectangle or quadrilateral, incorrect answer choices for a rectangles will not include a square or quadrilateral, and incorrect answer choices for a circle will not include an oval.

Example of Test Questions

Teacher says: "Look at the pictures. Find the triangle. Fill in the space under the triangle."





(correct) (incorrect) (incorrect)

COMPLIANCE STATEMENT

TITLE VI, CIVIL RIGHTS ACT OF 1964; THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS, TYLER DIVISION

Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

(1) acceptance policies on student transfers from other school districts;

(2) operation of school bus routes or runs on a non-segregated basis;

(3) nondiscrimination in extracurricular activities and the use of school facilities;

(4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff members who work with children;

(5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;

(6) nondiscriminatory practices relating to the use of a student's first language; and

(7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have occurred or are occurring.

Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, Department of Health, Education and Welfare.

If there is a direct violation of the Court Order in Civil Action No. 5281 that cannot be cleared through negotiation, the sanctions required by the Court Order are applied.

TITLE VII, CIVIL RIGHTS ACT OF 1964; EXECUTIVE ORDERS 11246 AND 11375; TITLE IX, 1973 EDUCATION AMENDMENTS; REHABILITATION ACT OF 1973 AS AMENDED; 1974 AMENDMENTS TO THE WAGE-HOUR LAW EXPANDING THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967; AND VIETNAM ERA VETERANS READJUSTMENT ASSISTANCE ACT OF 1972 AS AMENDED IN 1974.

It is the policy of the Texas Education Agency to comply fully with the nondiscrimination provisions of all federal and state laws and regulations by assuring that no person shall be excluded from consideration for recruitment, selection, appointment, training, promotion, retention, or any other personnel action, or be denied any benefits or participation in any programs or activities which it operates on the grounds of race, religion, color, national origin, sex, handicap, age, or veteran status (except where age, sex, or handicap constitute a bona fide occupational qualification necessary to proper and efficient administration). The Texas Education Agency makes positive efforts to employ and advance in employment all protected groups.